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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,371	09/10/2003	Andrew A. Frank	UC04-060-1	5452
8156	7590	11/10/2004	EXAMINER	
JOHN P. O'BANION O'BANION & RITCHEY LLP 400 CAPITOL MALL SUITE 1550 SACRAMENTO, CA 95814			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,371

Applicant(s)

FRANK ET AL.

Examiner

Thai-Ba Trieu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,12-14,16-18,20-23,25-28,30-32,34 and 36-40 is/are rejected.
- 7) ☐ Claim(s) 8,11,15,19,24,29,33 and 35 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. The numbering of claims is objected to since applicant omitted claim 24. Pursuant to rule 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

The examiner has renumbered claims 25-41 as claims 24-40. The rejections set forth below are based on the renumbered claims.

2. Claims 9-12 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 5-8. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 9-10, 12-14, and 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Shlien (Patent Number 5,400,596).

Regarding claims 1-7, 9-10, 12-14, and 37, Shlien discloses an energy control apparatus for a vehicle and a hybrid electric vehicle having an internal combustion engine (10), an electric motor (20), and a battery power supply (24), comprising:

a turbocharger (14) adapted to be coupled to said internal combustion engine (10);

an electric generator (16) adapted to be mechanically coupled to said turbocharger (14) and electrically connected to said motor (20) and to said battery power supply (24);

wherein said generator (16) is configured to charge said battery power supply (24) from power provided by said turbocharger (14); and

**wherein said generator (16) is configured to supply at least partial power to said motor (20) from power provided by said turbocharger (14);
and**

means (18) for controlling power output of said electric generator (16) for charging said battery or supplying power to electrical load in said engine while

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said engine is operational (See Figure 1, Column 2, lines 34-68, and Column 3, lines 1-5).

Regarding claims 38-40, the method as claimed would be inherent during the normal use and operation of Shlien device as disclosed (See Figure 1, Column 2, lines 34-68, and Column 3, lines 1-5).

Claims 16-18 and 20-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Geisse et al. (Patent Number 6,659,212 B2).

Geisse discloses in a hybrid electric vehicle having an internal combustion engine (6), an electric motor (8) and a battery power supply (14), the improvement comprising:

a turbocharger (16) coupled to said internal combustion engine (6); and
an electric generator (32) mechanically coupled to said turbocharger (16)
and electrically connected to said battery power supply (14); wherein said
generator (32) is configured to charge said battery power supply from power
provided by said turbocharger (16);

wherein said generator (32) is electrically connected to said motor
(8) and configured to supply at least partial power to said motor from
power provided by the said turbocharger (16);

means (10, 36) for controlling power output of said electric generator (32) for charging said battery power supply while said engine is operational (See Figure 1, Column 3, lines 39-67 and Column 4, lines 1-47).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25-28, 31-32, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geisse et al. (Patent Number 6,659,212 B2), in view of Severinsky et al. (Pub. Number US 2001/0039230 A1).

Geisse discloses a hybrid electric vehicle, comprising:

an internal combustion engine (6);

an electric motor (8);

a battery power supply (14) coupled to said electric motor (8);

a turbocharger (16) coupled to said internal combustion engine;

means (32) for charging said battery power supply from power provided by said turbocharger (16);

wherein said means comprises an electric generator (32)

mechanically coupled to said turbocharger (16) and to said battery power supply (14);

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wherein said generator (32) is electrically connected to said motor (8) and configured to supply at least partial power to said motor from power provided by said turbocharger (16);

wherein said generator (32) is configured to supply at least partial power to said motor (8) provided by said turbocharger (16); and

means (10) for controlling power output of said generator for charging said battery power supply while said engine is operational (See Figure 1, Column 3, lines 39-67 and Column 4, lines 1-47).

However, Geisse fails to disclose a drivetrain.

Severinsky teaches that it is conventional in the hybrid vehicle art, to utilize a drivetrain (15, 16, 51) configured to be coupled to said engine (40) and said motor (21, 25) (See Figure 11).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a drivetrain, as taught by Severinsky, to improve the performance efficiency of the Geisse vehicle.

Allowable Subject Matter

Claims **8, 11, 15, 19, 24, 29, 33 and 35** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kawamura (US Patent Number 5,881,559) discloses a hybrid electric vehicle.
- Selfors et al. (US Patent Number 5,828,137) discloses a turbo-alternator for a hybrid motor vehicle.
- Kawamura (US Patent Number 4,850,193) discloses a control system for a turbocharger with a rotary electric machine.
- Kobayashi (US Patent Number 4,805,409) discloses a method and apparatus for recovering exhaust gas energy of an internal combustion engine.
- Kawamura et al. (US Patent Number 4,757,686) disclose a control system for a supercharger in an internal combustion engine.
- Kawamura (US Patent Number 5,406,797) discloses a drive system for a turbocharger with a rotary electric machine.
- Deppe (Patent Number DE 196 00 252 A) discloses an improvement of overall efficiency of hybrid drive for an automobile.
- Kishishita et al. (Patent Number JP 06-317169 A) disclose a turbocharger controller equipped with an electric rotating machine.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

However, the examiner's new telephone number (751) 272-4867 will become effective after the expected changeover date of November 22, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
November 8, 2004


Thai-Ba Trieu
Patent Examiner
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